

**LIQUID CRYSTAL DISPLAY DEVICE**

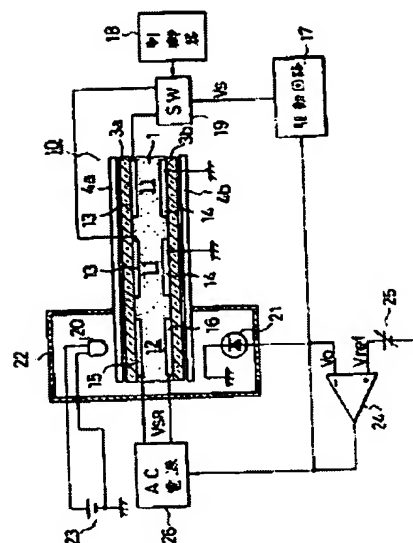
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**Inventor:** YAMADA HIDETOSHI; YUNOKI YUTAKA; KIMURA KENJI  
**Applicant:** OLYMPUS OPTICAL CO  
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**Abstract of JP59195627**

**PURPOSE:** To obtain a good gradation display characteristics over a wide temperature range and to obtain a liquid crystal display device proper to an electronic view finder or the like for a portable apparatus by removing a variation component of incident light amount included in an electric signal and controlling effective voltage to be applied so as to hold the size of the signal at a fixed value.

**CONSTITUTION:** A photodetector 21 outputs a signal  $V_o$  proportional to the intensity of light transmitted through a liquid crystal layer 1. When voltage VSR applied to transparent electrodes 15, 16 is extremely high for a using temperature,  $V_o > V_{ref}$  is formed and a signal for reducing the VSR is applied from a comparator 24 to a power supply 26. Consequently, the applied voltage is suppressed and the VSR is set up so that  $I_t = 50\%$  is formed. When the VSR is extremely low,  $V_o < V_{ref}$  is formed and a signal for increasing the VSR is applied to the power supply 26. Thus, the VSR is controlled to an optimum value in accordance with the using temperature. Simultaneously, voltage  $V_s$  to be applied to a display cell 11 is also controlled so that the most preferable gradation characteristics can be obtained.



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